

provide shade for cardamom. This is because such plantations offer no suitable sites for nesting and shelter. Because of their uniformity in canopy structure, age and size they are structurally less diverse compared to plantations where natural shade from several species of trees is regulated. Further, trees like *Erythrina* do not harbour insects like grubs, caterpillars and internal wood borers which are preferred by woodpecker.

The predatory activity of woodpecker was confined mostly to valleys. The woodpecker foraged cardamom planted area during evenings, mostly when there was no human inter-

vention. The woodpecker was very actively feeding on borer larvae from August to December, when borer activity is also at peak.

The Pyralid, *D. punctiferalis* is a pest on cardamom (David and Kumaraswami 1982). Despite six sprays recommended for controlling the borer (UAS, 1985), the damage persists. Three species of insect parasites have been recorded on the borer but borer mortality due to parasitisation is negligible (0.05%). In this context, the predatory activity of the woodpecker on the cardamom borer is crucially important.

Thanks are due to the Director, Dr. H. V. Pattanshetti for interest and encouragement.

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18. MOVEMENT OF THE EASTERN SWALLOW (*HIRUNDO RUSTICA GUTTURALIS*) RINGED AT MOOTPUZHA (KERALA)

Every year, in the month of October, local newspapers in Kerala write about the large congregation of Swallows roosting on telegraph wires across Mootpuzha river, close to Mootpuzha bridge. These attract the attention of people crossing over the bridge. The birds had been identified many years earlier by Dr. V. S. Vijayan, of the Society's Bharatpur Hydrobiology project as the Eastern Swallow (*Hirundo rustica*). In October, 1985 attention

was again drawn to this congregation by Mr. K. K. Surendran. At his instance, I was asked to try and ring some of the swallows. I, therefore, visited the area with 200 Z-size rings and in the night, with the help of two assistants caught 199 birds by using a large butterfly net made out of a mist net. All the birds were ringed and released at the end of the bridge in bright moonlight. The birds were seen flying back to their roost. Out of the 199 birds

ringed three interesting recoveries have been reported from three different places in Tamilnadu and Kerala.

One recovery is from the town of Theni (in Tamil Nadu) close to Periyar in the Western Ghats. The distance from Moovatpuzha to Theni is c. 180 km by road. The ring No. Z-25710 was recovered on 2 November, 1986 with the leg of the bird, which had probably been caught by a predator. This was reported by Mr. Kumaraswami, a Forest College trainee, who visited Point Calimere. The ring was recovered almost in a straight line to the east of Mootpuzha.

The second recovery was from the town of Pattukottai (10° 26' N; 79° 19'E) on 9 Nov., 1986. The bird was found under a lamp-post on a rainy day by Mr. Nateshan. I could get only the ring No. Z-25848 which was removed from the bird. Pattukottai is on the east coast almost in the same line as Theni and about 400 km from the place of ringing. It is about 600 km from Point Calimere Sanctuary.

The third ring was recovered by me during my visit to Parambikulam sanctuary on 21 Feb., 1986. This was found under a bat roost among wing feathers of swallows, warblers and flycatchers scattered around. The dry tarsus bone of the swallow with the ring was recovered, indicating that the kill was at least a few days old. Numerous bats were hanging on the roof which I could not identify, but

Mr. J. C. Daniel suggested that the predator could be the Indian False Vampire (*Megaderma lyra*). According to Prater (The BOOK OF INDIAN ANIMALS, 1971) the food of *Megaderma* includes birds like crag martin. We have identified *Megaderma lyra* from the bat roost at Point Calimere's old rest house and during the season I have seen wings and tarsi of birds like *Acrocephalus dumetorum*, *Sylvia curruca* and various *Muscicapa* spp. under the roost.

The dispersal of the swallows from the Mootpuzha roost is interesting. Having had two recoveries from three locations, one of which is close to Point Calimere, and also considering the large influx of swallows during the months of November and December according to the census data from Point Calimere, we can assume that some of the birds from the Mootpuzha roost perhaps visit Point Calimere also.

We hope to ring more birds of this species during the next year and to try and follow their movements.

I thank Mr. Kumaraswamy and Mr. Nateshan for their kindness in informing us of the ring recovery and making the rings available for confirmation. Special thanks are due to Mr. K. K. Surendran, for providing information on the congregation of swallows at Mootpuzha.

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